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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,852	03/24/2004	Lizhong Sun	026-0045	5481
22120	7590	09/16/2005	EXAMINER	
ZAGORIN O'BRIEN GRAHAM LLP 7600B N. CAPITAL OF TEXAS HWY. SUITE 350 AUSTIN, TX 78731			LE, DINH THANH	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,852	<b>Applicant(s)</b> SUN ET AL.	
	<b>Examiner</b> DINH T. LE	<b>Art Unit</b> 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 July 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 6-9, 11-14, 16, 17, 19, 20-22, 24, 25, 27, 28, 30-34 and 36-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 6-9 is/are allowed.
- 6) ☒ Claim(s) 11-14, 16, 17, 19, 20-22, 24, 25, 27, 28, 30-34 and 36-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **NON-FINAL REJECTION**

### ***Claim Rejections***

#### ***Claim Rejections - 35 USC § 112***

Claims 11-14, 16-17, 19, 20-22, 24-25, 27-28, 30-34 and 36-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 11, it is unclear how the stages can be “turned-off” since no means for performing the turning off function is recited in the claim. The same is true for claim 20, 27 and 34.

In claim 27, it is unclear how the recitation “selectively feeding back an output . . . divide stages” on lines 5-6 is read on the preferred embodiment. Insofar as understood, no such limitation is seen on the drawings. The same is true for claim 34.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 19, 27-28, 34 and 39 are rejected under 35 USC 102 (b) as being anticipated by Kimura (US 3,813,610).

Kimura discloses in Figure 1 a divider circuit comprising:

- a sequence of divide stages (5) coupled to provide a plurality of difference divide ratios; and
- wherein respective ones of the stages include an activation input (SD) coupled to receive an activation signal from a logic gate (9) to selectively turn off one or more of stages (5) by switches (10) if one or more of the stages are not used for a selected divide ration.

With regard to claim 19, the divider (5) of Kimura can be selected to alter from a dividing ration 1:32 to 1:1, see lines 45-47, column 4.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 USC 103 (a) as being unpatentable over Hassoun (US 6,061,418) in view of Kimura (US 3,813,610).

Hassoun discloses in FigurezA-zB, 3A-3B and 5 a divider ckcuit comprising a sequence of divide stages (310 1 to 310 N) coupled to provide a plurality of difference divide ratios; a means for correcting a duty cycle (530, Figure 5); and at least on multiplexer (320, 330) coupled

to selectively feedback the output of a first divide stage (310 2) to an input of divide stage (310-1) earlier in the stages. However, Hassoun does not disclose that divide stages each has an activation input to selectively turn off a respective divide stage. Kimura teaches in Figure 1 a divider circuit comprising AND gates (9) for selectively turning off selected divide stages to alter programmable dividing ratios, see lines 45-48, column 4. It would have been obvious to a person having skill in the art at the time the invention was made to employ the gates suggested by Kimura in the circuit of Hassoun for the purpose of altering programmable dividing ratios.

***Allowable Subject Matter***

Claims 1-3, 6-9 and 16-17 are allowed because the prior art of record does not show the duty cycle stage as combined in claim 1.

Claims 12-14, 21-22, 24-25, 30-34 and 36-38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The claims are allowed because the prior art of record does not show:


- a duty-cycle stage coupled to correct a duty cycle of outputs having an odd divide ratio as combined;
- a self correction logic as combined; and
- a means for correcting an abnormal stage as combined.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DINH T. LE whose telephone number is (571) 272-1745. The examiner can normally be reached on Monday-Friday (8AM-7PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY CALLAHAN can be reached at (571) 272-1740.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DINH T. LE  
PRIMARY EXAMINER